

Claim Listing

In the following list of claims, additions are shown by underlining, and deletions are shown by striking-through.

1. (Currently Amended) A method of defining and evaluating a set of business rules during runtime of a software application program in a computer system, the method comprising:

during runtime of the software application program,

creating a rule category for the set of business rules;

(a) specifying a current rule for the set of business rules;

(b) defining a state object for the current rule, wherein the state object comprises user data relevant to the current rule;

~~(b)(c)~~ defining at least one condition for the current rule, wherein the at least one condition comprises a decision based on data made available to the software application, and the at least one condition is a pattern condition, a structured query language (SQL) condition, or a script condition;

~~(e)(d)~~ defining at least one action for the current rule, wherein the at least one action is based on the at least one condition, and the at least one action is a pattern action, a structured query language (SQL) action, or a script action;

~~(d)(e)~~ linking the at least one condition with the at least one action to define a business rule from the current rule;

(f) storing the current rule in the rule category for the set of rules; and

~~(e)(g)~~ repeating operations (a)-~~(d)(f)~~ until each business rule in the set of business rules has been defined;

retrieving a business rule;

evaluating the business rule based on the at least one defined condition for the business rule, the at least one defined action for the business rule, and the user data in the state object defined for the business rule, including examining the user data in the state object based on at least one of the pattern condition, the SQL condition, and the script condition; and

updating or adding new user data to the state object based on the evaluation of the business rule using at least one of the pattern action, the SQL action, and the script action.

2. (Canceled)

3. (Currently Amended) The method of claim 21, wherein the user data comprises fields stored in a database.

4. (Original) The method of claim 3, wherein the at least one user action updates the fields in the database during runtime of the software application.

5. (Currently Amended) The method of claim 21, wherein storing the current rule in the rule category for the set of rules comprises:

generating a data file for the current rule in the rule category;

saving the data file in the computer system.

6. (Original) The method of claim 5, wherein saving the data file in the computer system comprises saving the data file to the database.

7. (Original) The method of claim 5, wherein the data file is an XML file.

8-10. (Canceled)

11. (Currently Amended) The method of claim 1, wherein the ~~at least one action~~ s a pattern action uses dynamic binding or reflection to update or add new user data to the state object.

12-14. (Canceled)

15. (Currently Amended) The method of claim 441, further comprising determining success of the business rule based on the evaluation.

16 17. (Canceled)

18. (Currently Amended) The method of claim 441, wherein the business rule is retrieved from a database.

19. (Currently Amended) The method of claim 441, wherein the business rule is retrieved from a file.

20-21. (Canceled)

22. (Currently Amended) A computer-readable medium having computer executable modules for defining, and executing, and evaluating a set of business rules comprising:

a rule designer module for:

creating a rule category for the set of business rules;

(a) specifying a current rule for the set of business rules;

(b) defining a state object for the current rule, wherein the state object comprises user data relevant to the current rule;

(b)(c) defining at least one condition for the current rule, wherein the at least one condition comprises a decision based on data made available to the software application, and the at least one condition is a pattern condition, a structured query language (SQL) condition, or a script condition;

(c)(d) defining at least one action for the current rule, wherein the at least one action is based on the at least one condition, and the at least one condition is a pattern action, a structured query language (SQL) action, or a script action;

(d)(e) linking the at least one condition with the at least one action to define a business rule from the current rule;

(e)(f) generating a data file representing the defined business rule; and

(f)(g) repeating operations (a)-(e)(f) for each business rule in the rule category;

and

storing a data file generated for each defined business rule in the rule category; and

a rules engine module for evaluating each business rule in the rule category, including:

retrieving a business rule;

evaluating the business rule based on the at least one defined condition for the business rule, the at least one defined action for the business rule, and the user data in the state object defined for the business rule, including examining the user data in the state object based on at least one of the pattern condition, the SQL condition, and the script condition; and

updating or adding new user data to the state object based on the evaluation of the business rule using at least one of the pattern action, the SQL action, and the script action.

23. (Original) The computer-readable medium of claim 22, wherein the user data comprises fields stored in a database.

24-28. (Canceled)

29. (Currently Amended) The computer-readable medium of claim 22, wherein the pattern action uses dynamic binding or reflection to update or add new user data to the state object.

30-31. (Canceled)

32. (Currently amended) A system for defining and evaluating a set of business rules comprising:

a rule designer module for:

creating a rule category for the set of business rules;

(a) specifying a current rule for the set of business rules;

(b) defining a state object for the current rule, wherein the state object comprises one or more data objects, each data object containing user data relevant to the current rule;

(c) defining at least one condition for the current rule, wherein the at least one condition comprises a decision based on data made available to the system, and the at least one condition is a pattern condition, a structured query language (SQL) condition, or a script condition;

(d) defining at least one action for the current rule, wherein the at least one action is based on the at least one condition, and the at least one action is a pattern action, a structured query language (SQL) action, or a script action;

e) linking the at least one condition with the at least one action to define a business rule from the current rule;

(f) generating a data file representing the defined business rule; and

(g) repeating operations (a)-(f) for each business rule in the rule category;

and

a database for storing the user data for in the state object defined by the rules engine module; and

a rules engine module for:

retrieving a business rule;

evaluating the business rule based on the at least one defined condition for the business rule, the at least one defined action for the business rule, and the user data in the state object defined for the business rule, including examining the user data in the state object based on at least one of the pattern condition, the SQL condition, and the script condition; and

updating or adding new user data to the state object based on the evaluation of the business rule using at least one of the pattern action, the SQL action, and the script action

33. (Currently amended) A The computer system ~~for evaluating a business rule comprising~~ of claim 32, wherein the rules engine module

~~determining~~determines the success or failure of the business rule based on the evaluation; ~~and~~

~~updating user data in a state object based on the evaluation of the business rules.~~

34-36. (Canceled)